



Print Factory



Users Manual

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Chapter 1 Introduction

Print Factory is an automated CD-R and DVD-R printing solution. Print Factory combines Microboards' patented autoloading system with Hewlett Packard's inkjet printer engine, giving the highest output possible. Print Factory has a 50-disc capacity, making the task of printing large numbers of discs fast, easy and hands-free.

Fully Integrated Automation

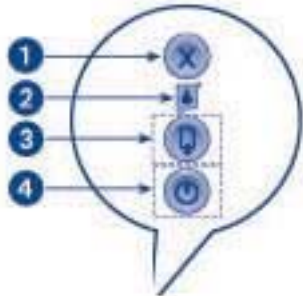
Microboards combined their patented autoloading system with HP's new inkjet printer engine to give users the highest output possible, both in image resolution and print speed. Since Print Factory is an autoloading printer, no calibration of robotics or manual feeding of discs is required. Print Factory connects by USB or Parallel interface to the computer, and comes with label design software.

Flexibility and Speed for Any Application

While Print Factory was designed to fill a need in the high-volume arena, it also has the ability to print at 4800 x 1200 dpi on both DVD and CD media. With the included design software, users can enjoy its benefits whether making a few discs or a few hundred. Print Factory is capable of producing up to 200 discs per hour. In addition, Print Factory uses standard HP color and black ink cartridges. The cartridges have a very high yield at a competitive cost, which allows for printing costs of a few pennies per disc

Chapter 2 Printer Description

Front Panel Indicators and Buttons



- 1) Cancel Button – Pressing the Cancel button cancels the current print job.
- 2) Print Cartridge Status Light – The light inside the Print Cartridge Status symbol flashes when a print cartridge is low on ink or incorrectly installed, or the printer’s cover is open.
- 3) Resume Button and Light – The Resume light flashes when an action is required, such as loading a disc or clearing a jam. When the action is completed, press the resume button to continue printing.
- 4) Power Button and Light – The Power button turns the printer on and off. It may take a few seconds for the printer to turn on after you press the Power button. The green light next to the Power button flashes when the printer is processing.

NOTE: The AC power switch located on the back of the printer must be turned on first, in order to supply power to the Front Panel.

What’s Included

When unpacking your Print Factory system, the following items should be included:

Print Factory printing system
 Power Cord
 Alignment CD’s
 Blank Printable CD’s
 Users Manual (This document)
 Microboards Print Factory CD (Includes Windows 2000/XP drivers and Surething Label software)
 Black Ink cartridge (versatile black)
 Color Ink cartridge
 USB Printer Cable
 Disc Guide Assembly

If any of these items are missing, please contact your distributor or Microboards Technology Technical Support department at 952-556-1639.

Chapter 3 Installation

Once your Print Factory system is unpacked and you have verified that everything is included, you are ready to install the printer.

Installing Ink Cartridges

Supported Ink Cartridges

HP standard ink cartridges are supported. The Color Ink is cartridge HP 78, both Large (38 ml) and regular (19 ml) sizes. The HP part number for the 78 Large is C6578a. The HP part number for the 78 regular is C6578d. The black ink that comes with the system is HP part number C8842A, Versatile Black Ink. This is a fast drying black ink, designed for coated surfaces, like an inkjet printable CD or DVD.

Standard black ink cartridges, are also supported, but can take longer to dry. The HP 45 black ink cartridge is used. The HP part number is 51645A. It is recommended to run in Photo mode only when using the standard black ink cartridge. Running a standard black at Normal or fast Normal can cause the text to not print evenly.

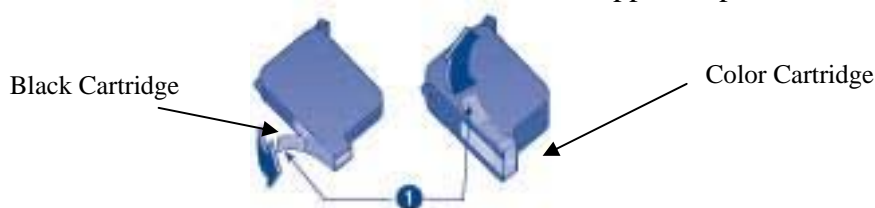
**Refill kits or non-HP ink cartridges are not recommended for use in the PrintFactory system. Use of these types of cartridges may produce inferior print quality and in extreme cases cause damage to the printer. Use of these types of cartridges will void the warranty.*

Changing these settings is done in the Printer Preferences, described in Chapter 5.

Loading / Replacing Ink Cartridges

The Print Factory system ships with standard HP ink cartridges. The black ink cartridge is specifically designed for fast drying applications. We highly recommend using the C8842A black cartridge for printing on CD or DVD discs. The HP 51645A black cartridge is supported with the printer, but should only be used in PHOTO mode. It can take longer for the black ink to dry when using the HP 45 cartridge.

- 1) Plug in the AC power cord to the back of the printer and into a power source.
- 2) Turn on the power switch located on the back of the printer.
- 3) Press the Power button to turn on the printer.
- 4) Open the top cover. The print cartridge cradle moves to the center of the printer.
- 5) Raise the cradle latch.
- 6) If replacing an ink cartridge, lift the old cartridge out of the cradle.
- 7) Remove the new print cartridge from its packaging and carefully remove the plastic tape. Hold the print cartridge so that the copper strip is at the bottom.



Pull tab to remove the plastic tape.

- 8) Push the print cartridge firmly into the cradle.
- 9) Secure the cradle latch.

Installing Disc Guide and Output Bin

- To install the output bin, lift the front end of the printer.
- Align the two holes in the output bin with the rubber feet on the front of the printer.
- Lower the front end of the printer.
- The output bin should now be securely in place.

- To install the disc guide, place the metal bracket, facing down, into the output slot of the printer.
- The metal bracket will hold the disc guide in place.
- Please make sure the disc guide is centered in the output slot.
- If it is not centered, it can prevent the discs from completely ejecting out of the printer.



Connecting to a Computer

You have two options when connecting to a computer, USB and Parallel. You will need to decide which method is available on your computer. Follow the instructions listed below.

Parallel Port

Confirm that your PC is turned off.

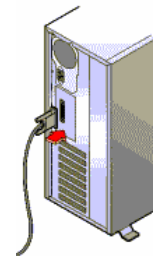
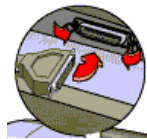
Plug the printer cable into the back of the printer.

Use the locking clips to secure the connection.

Plug the other end of the cable into the parallel port on the back of the PC.

Secure the connection by screwing in the two posts.

Proceed to "Installing the printer driver" to complete the installation.



USB Port

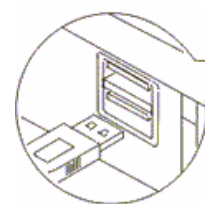
Confirm the PC is turned off.

Plug the small end of the USB cable into the back of the printer.

Install the larger end of the USB cable into an available USB port on the PC.

Confirm that both ends are securely in place.

Proceed to "Installing the printer driver" to complete the installation.



Installing the Printer Driver

USB Port and Parallel Port

The install procedure is the same for both the Parallel and USB port connections. Windows 2000 and Windows XP will find the new hardware at boot up and step you through the installation process.

1. Once you have the printer connected to your PC, as described above, in the Connecting to a Computer USB Port or Parallel Port, turn on the power to the printer and then to your computer.
2. When the system boots up, the computer will state that it has found new hardware.

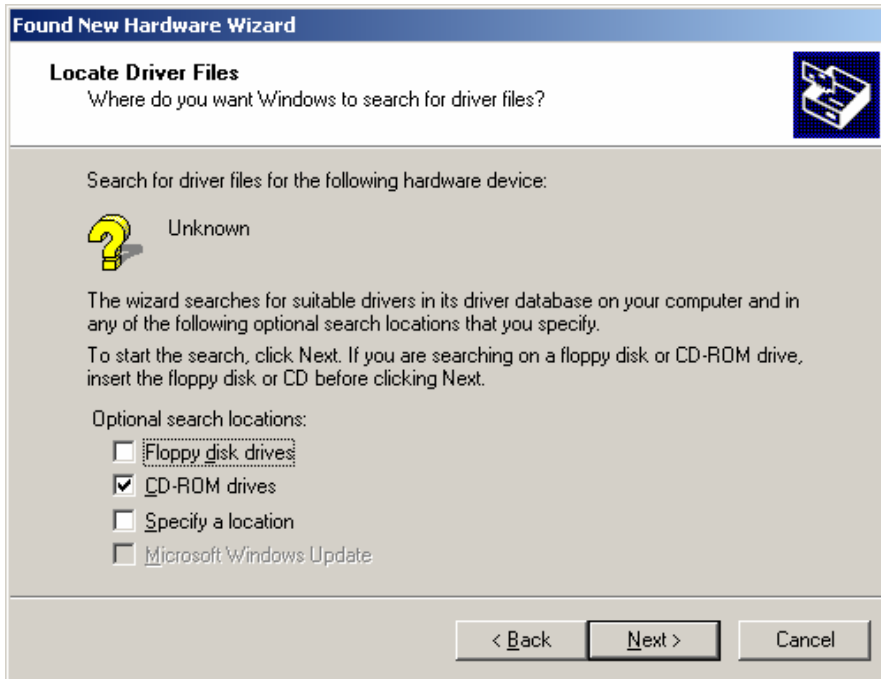
Windows 2000 install procedures:



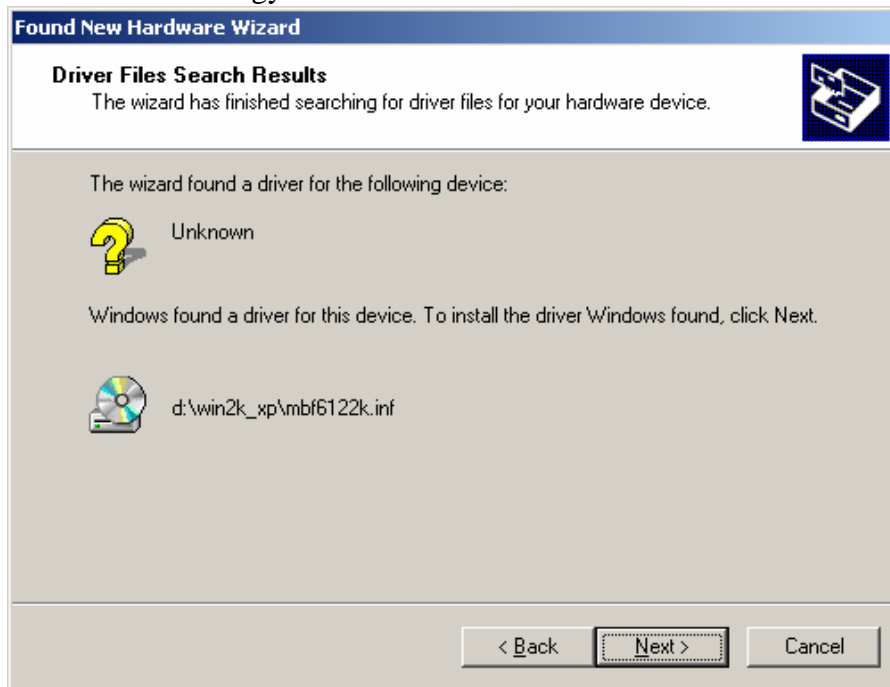
3. Click the Next button.



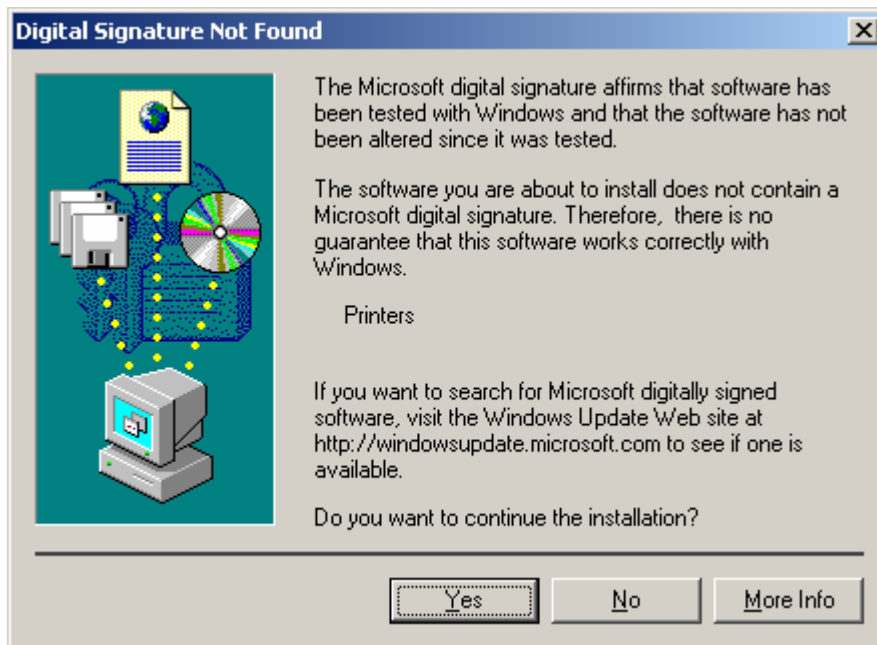
4. Place the Print Factory driver CD into your CD/DVDROM drive.
5. Select the Search for a suitable driver for my device option and click Next.



6. Check the CD-ROM drives box and click Next.

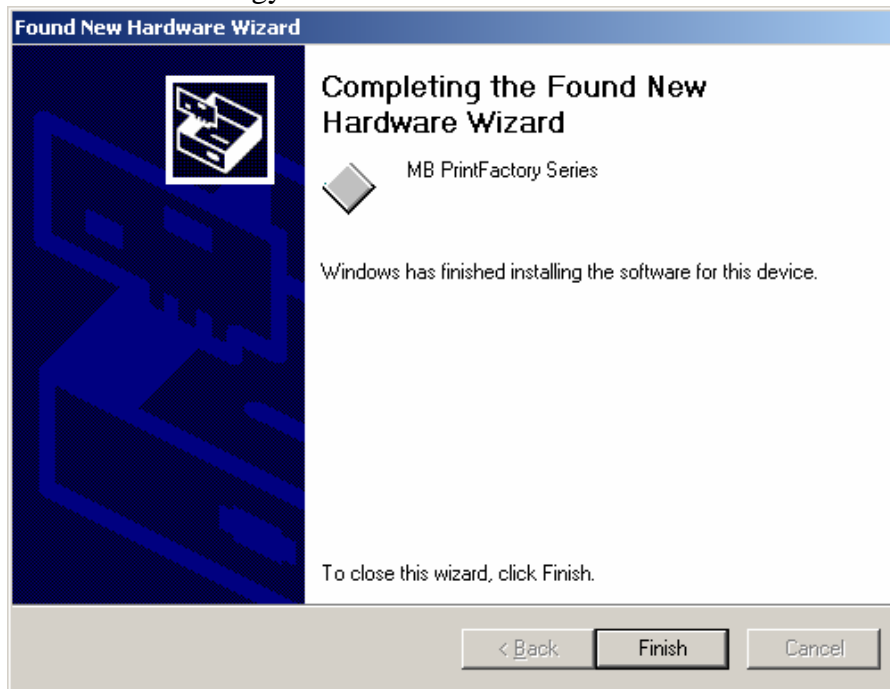


7. The install file will be found on the CDROM drive. Click Next.



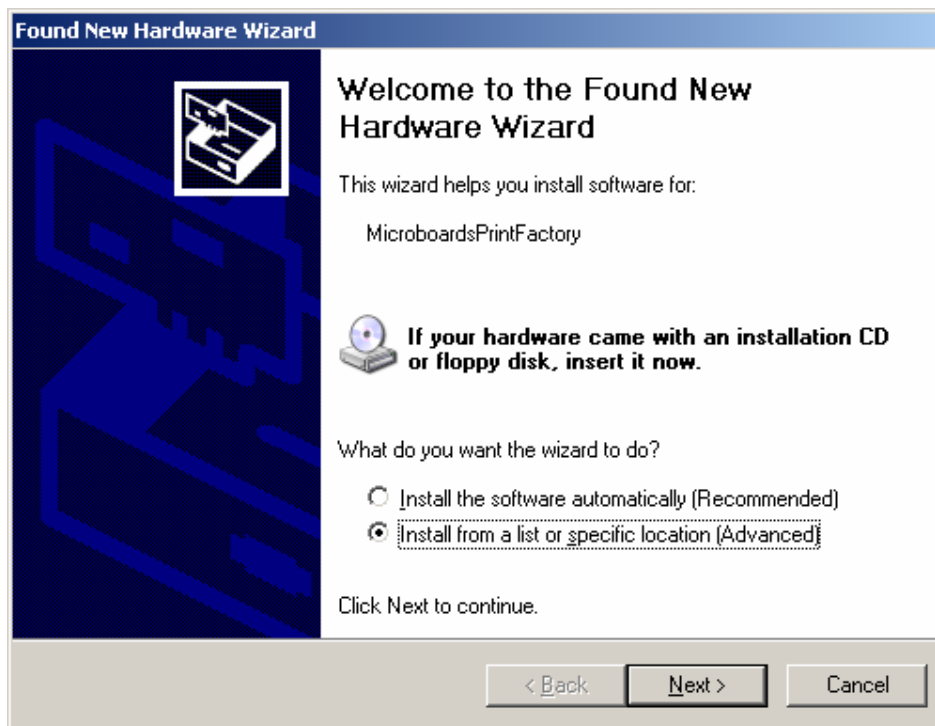
8. The Digital Signature screen will appear. Click Yes at the bottom of the screen.

9. The driver files will now be copied to the hard drive.



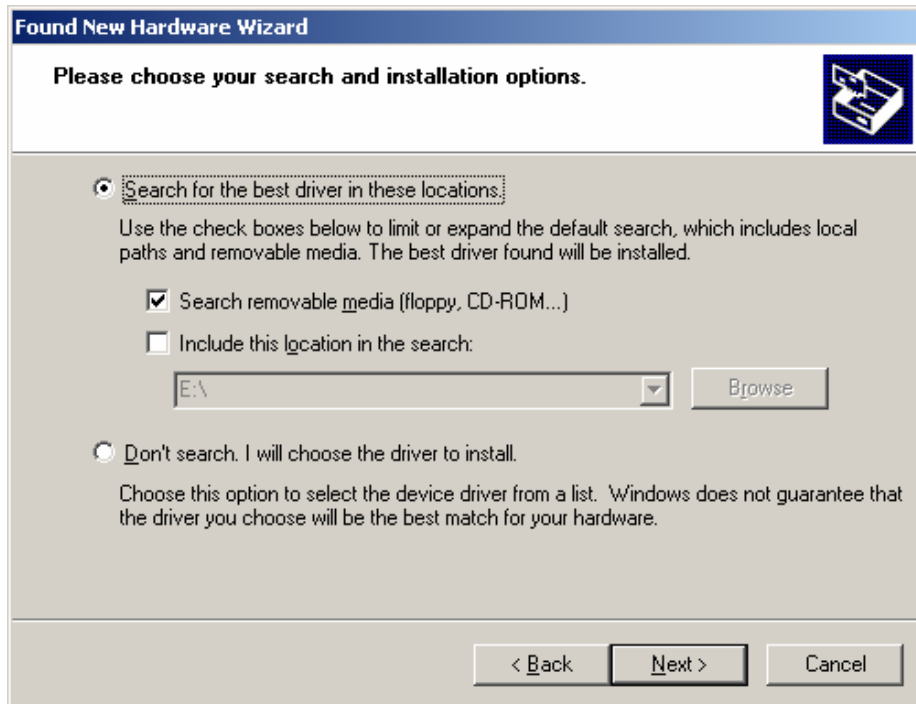
10. Once installation is complete, click on Finish.

Windows XP install procedures:



11. Place the Print Factory driver CD into your CD/DVDROM drive.

12. Select the Install from a list or specific location option and click Next.

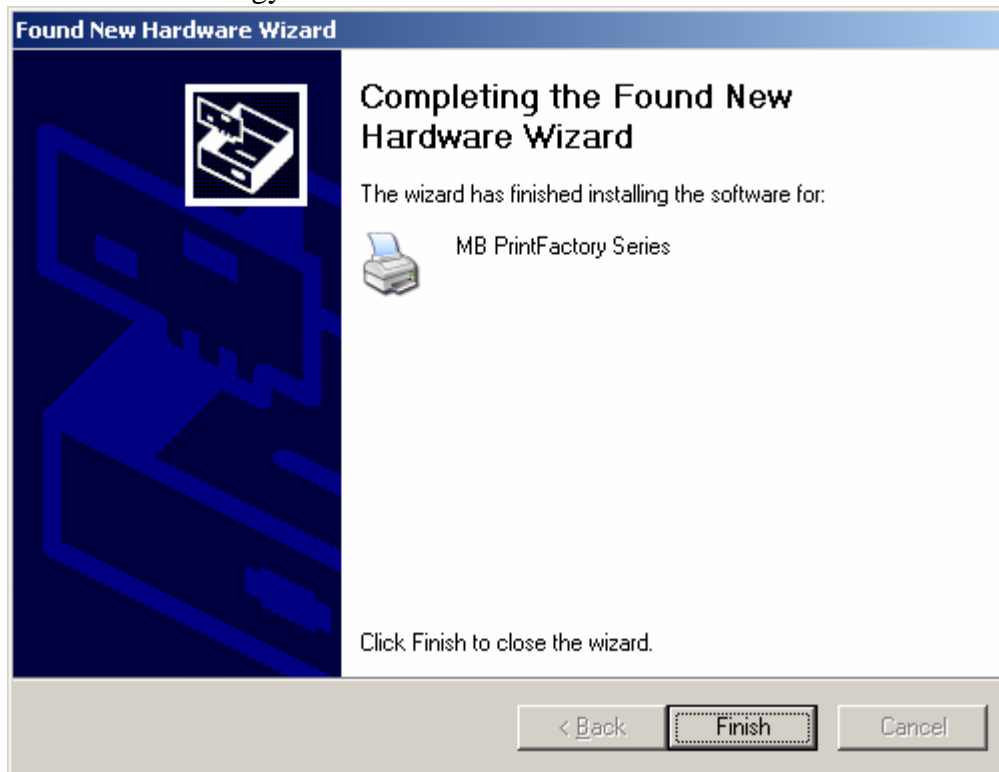


13. Check the Search removable media box and click Next.



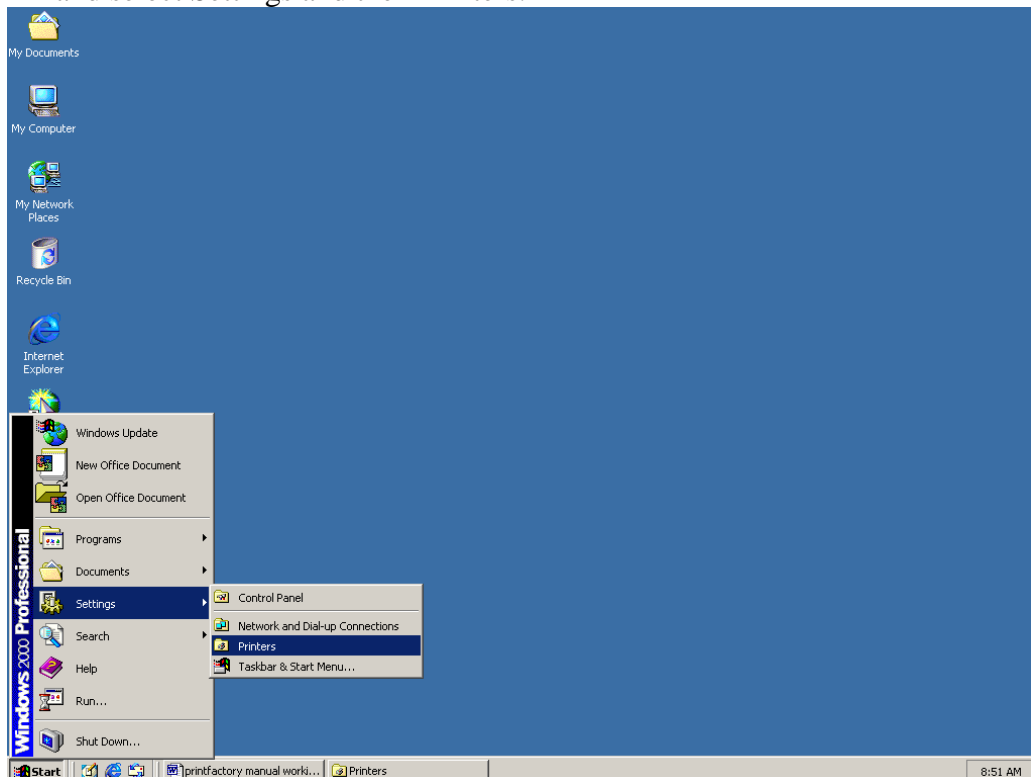
14. The Digital Signature screen will appear. Click Continue Anyway at the bottom of the screen.

15. The driver files will now be copied to the hard drive.

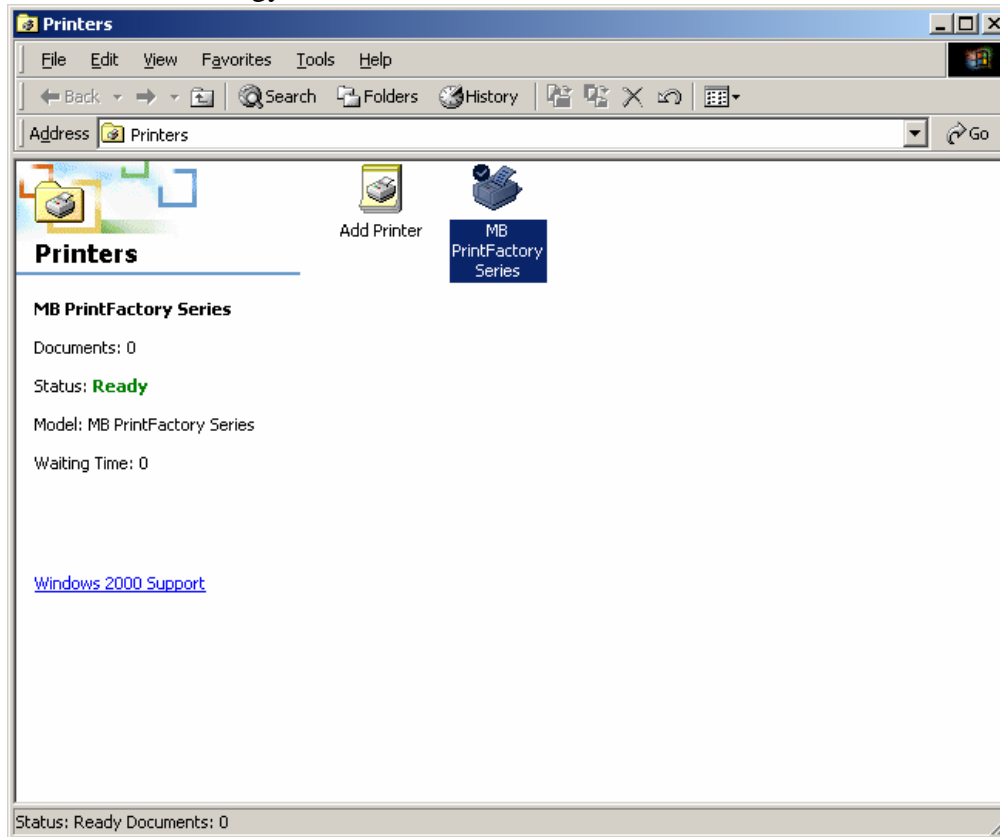


16. Once installation is complete, click on Finish.

17. The printer is now installed and ready for use. To confirm installation, you can Click on Start, and select Settings and then Printers.



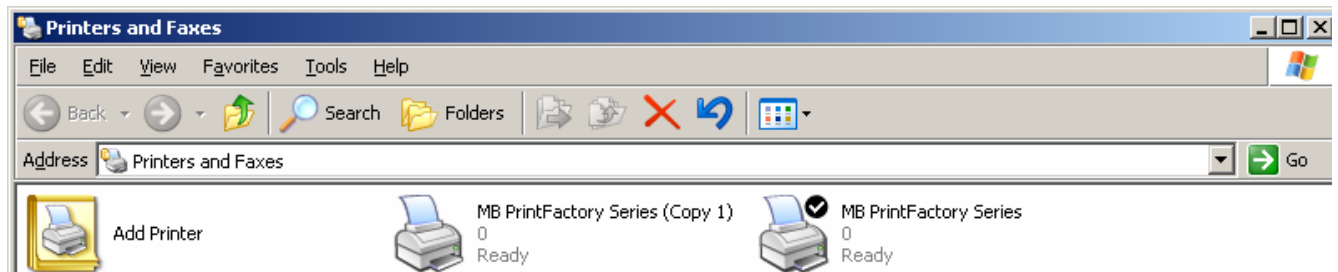
18. You should see the new printer now installed.



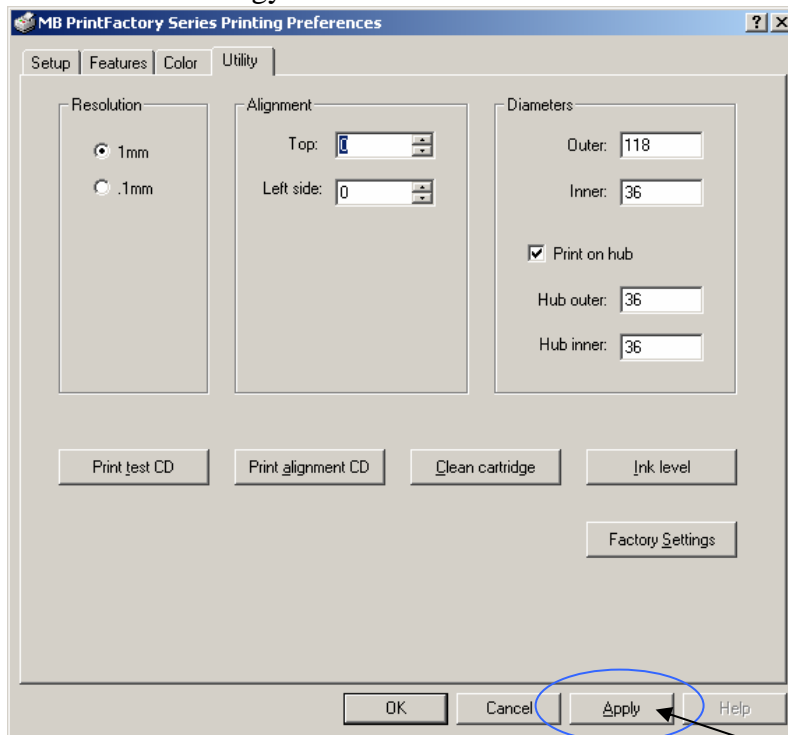
Multiple Printers

When installing multiple printers, Windows will recognize the new printer and install the driver. Windows 2000 does this automatically. Windows XP may ask for the driver CD again.

Once the printer is installed, you will see the additional printer labeled MB PrintFactory Series (Copy 1).



Before using the newly installed printer, you must first go into the printer preferences and set the values for that printer in Windows. To do this, right click on the MB PrintFactory Series (Copy 1) and select Printer Preferences. Go to the utility tab. Change the TOP or LEFT value from zero to some other number and then back to zero again.

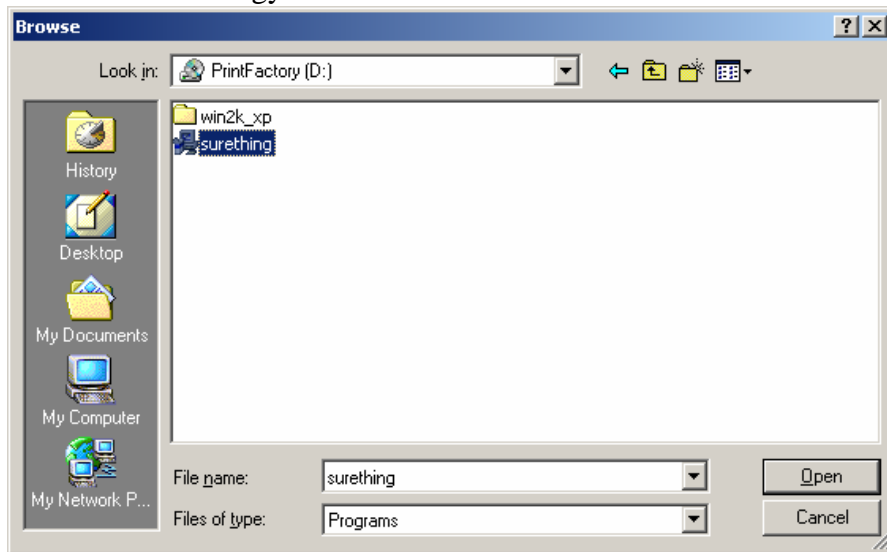


The Apply button should now be active. Click the Apply button.
The additional printer is now ready for use.

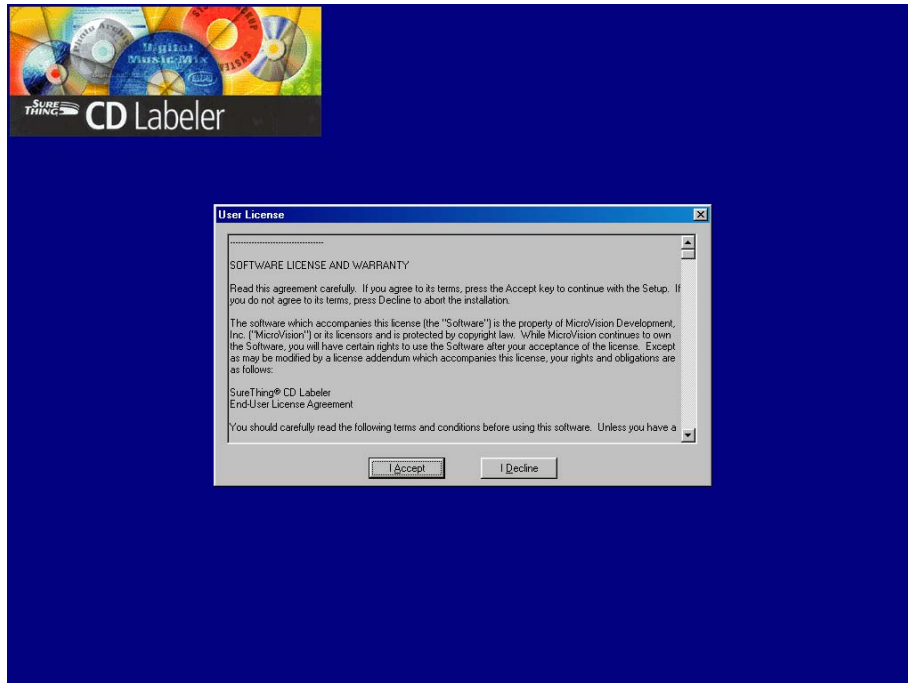
Installing Surething CD Labeler Software

Surething Labeler software is an easy to use application, designed to work with the Microboards Print Factory printer. To install the software:

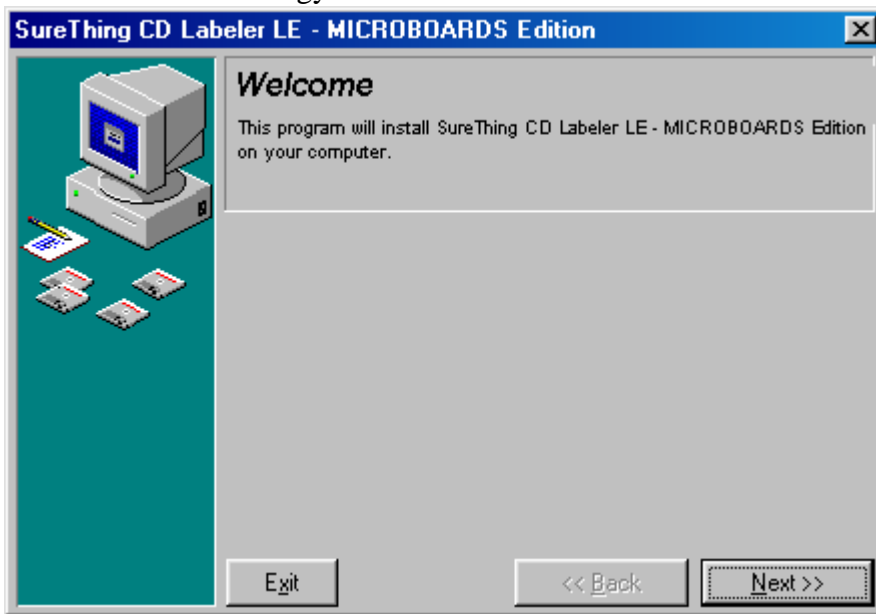
1. Place the Surething CD into your CD/DVD ROM reader drive.
2. Installation should begin automatically.
3. If your system does not automatically start the setup program, click on the Start button and select RUN. Click the browse button and go to your CD/DVDROM drive. Select the surething.exe file and click OK.



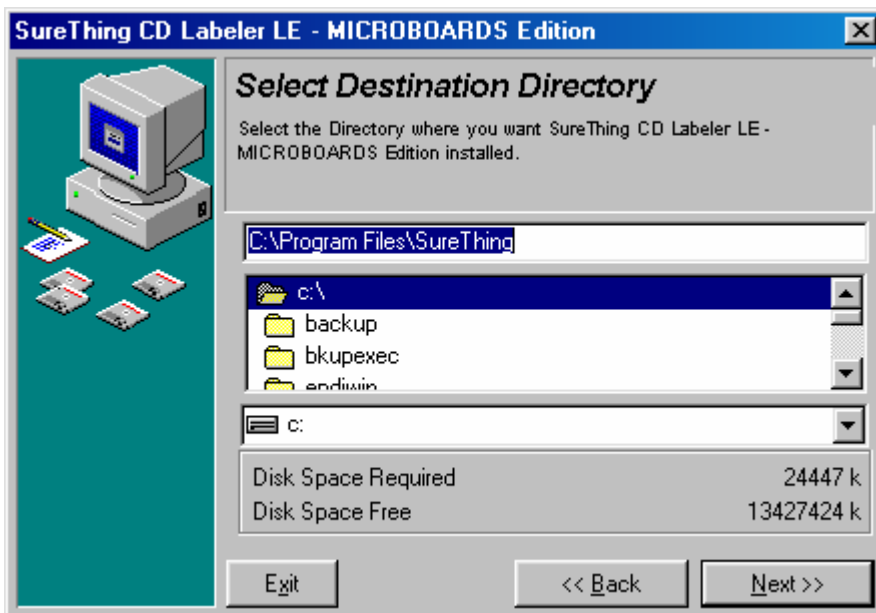
4. Please read the Software License and Warranty screen and click on I Accept.



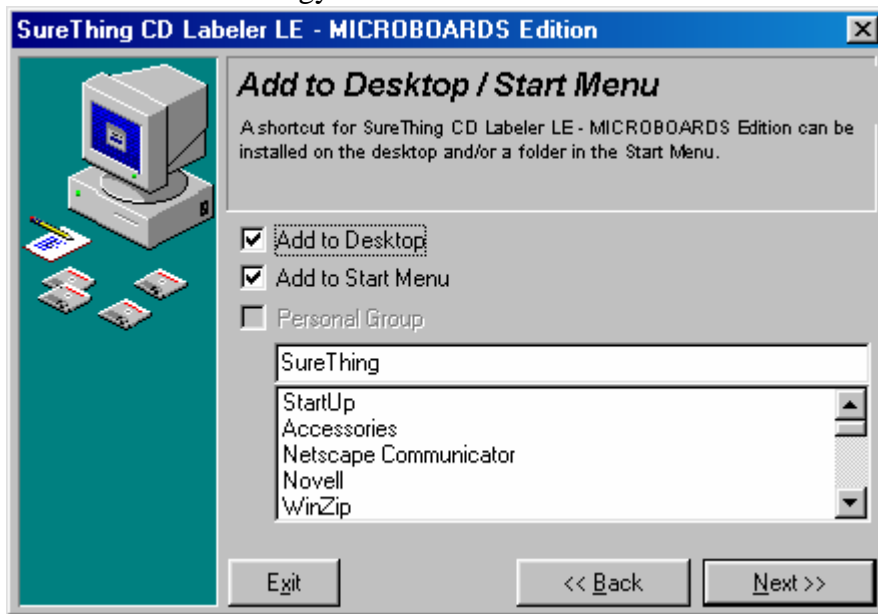
5. At the Welcome screen, click Next.



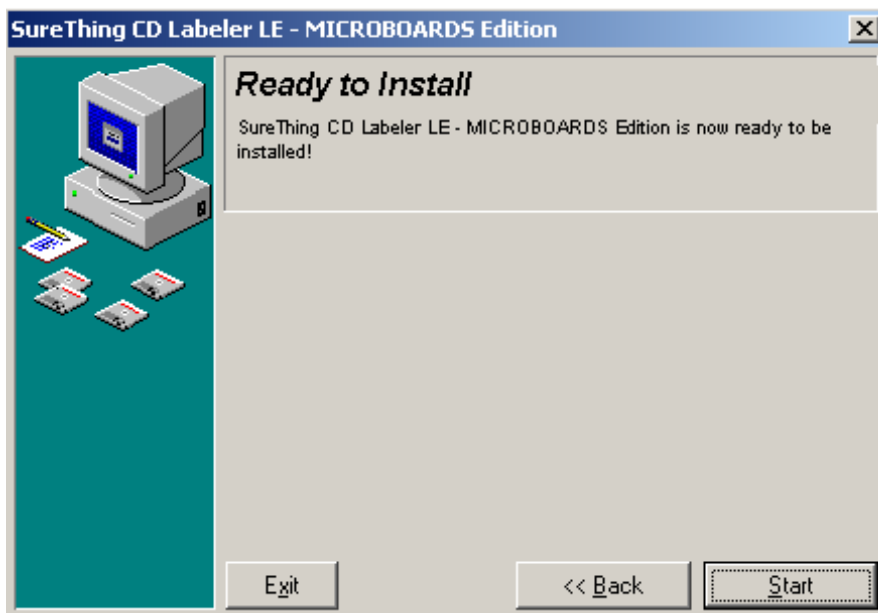
6. To install the software in the default directory, click Next at the Select Destination Directory screen. If you wish to use a different directory, select it now and then click Next.



7. At the Add to Desktop / Start Menu screen uncheck the boxes for Add to Desktop and/or Add to Start Menu, if you do not want this option. Click Next.

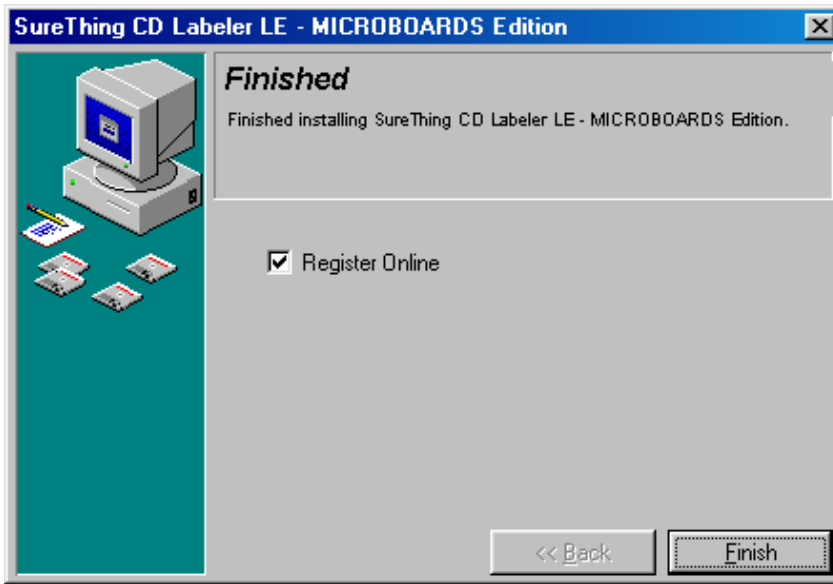


8. Click Start at the Ready to Install screen.

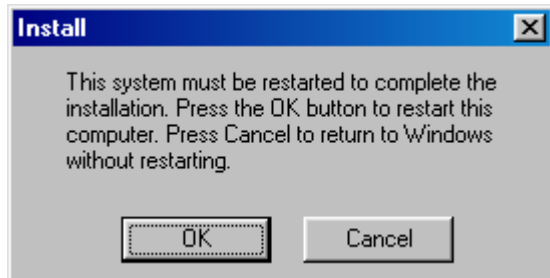


9. The software will now be installed.

10. Click Finish to complete the installation. At this screen, you also have the option to register online.



11. The system must be restarted for the software to run correctly. If you can restart your system now, click on OK. Otherwise click on Cancel and restart your system later on. Remember, your system must be restarted in order for the software to work correctly.



Chapter 4 Using the Printer

The first step in using your Print Factory is to confirm the printer is communicating correctly with the computer and the information printed on the discs will be aligned properly.

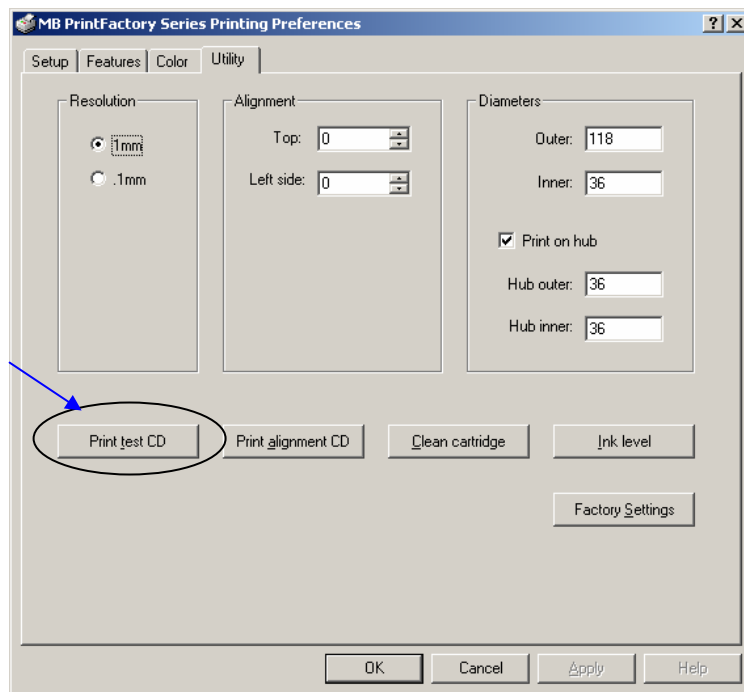
Alignment

Print Test Disc

To confirm the computer is communicating with the printer, print a Test Disc. This can be done with one of the inkjet printable CD's included with your printer, or an inkjet compatible disc you may already have.

To print the Test Disc:

- Click on the Start Button.
- Select Settings and then Printers.
- Right click on the Printer icon.
- Select Printer Preferences.
- Select the Utility Tab.

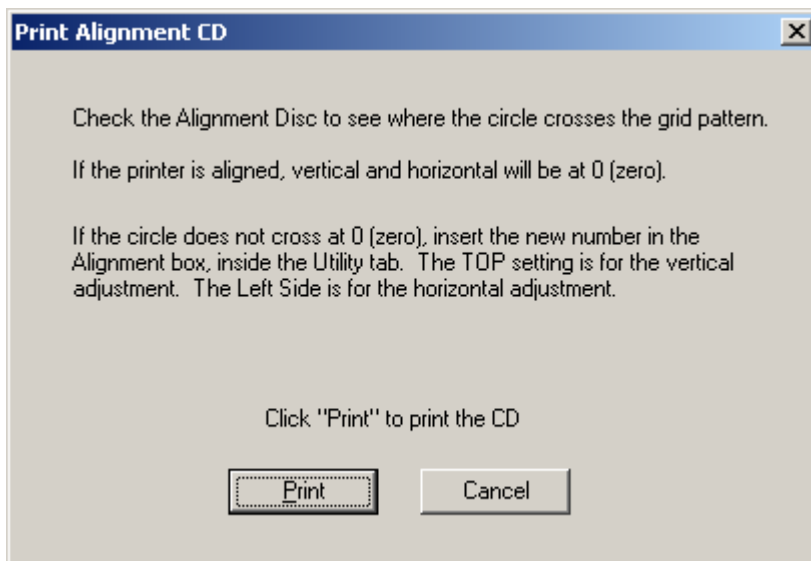
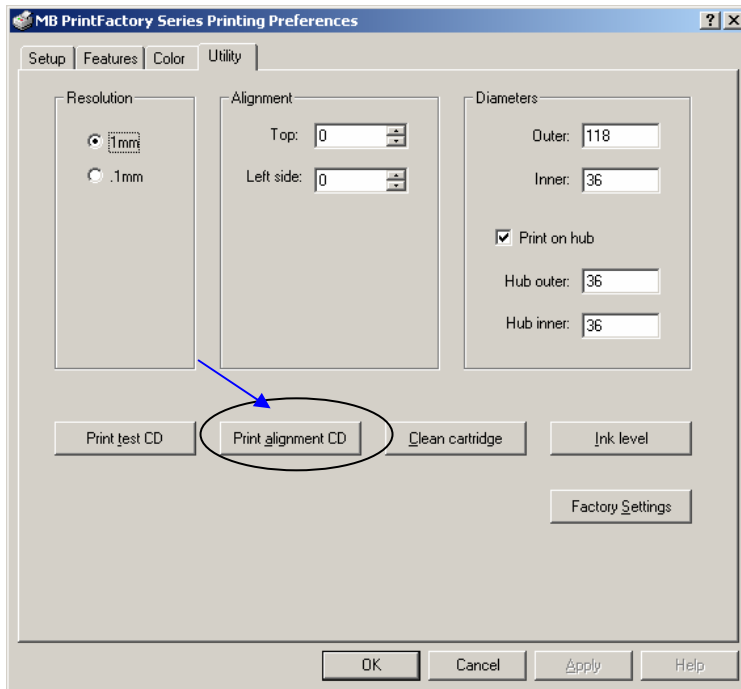


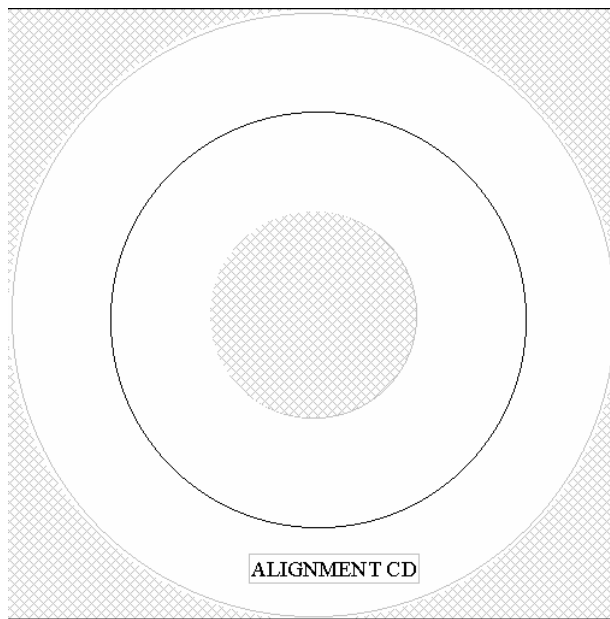
- Press Print Test Disc
- If the alignment is OK, proceed with your printing project.
- If not, go to Align Disc

Align Disc

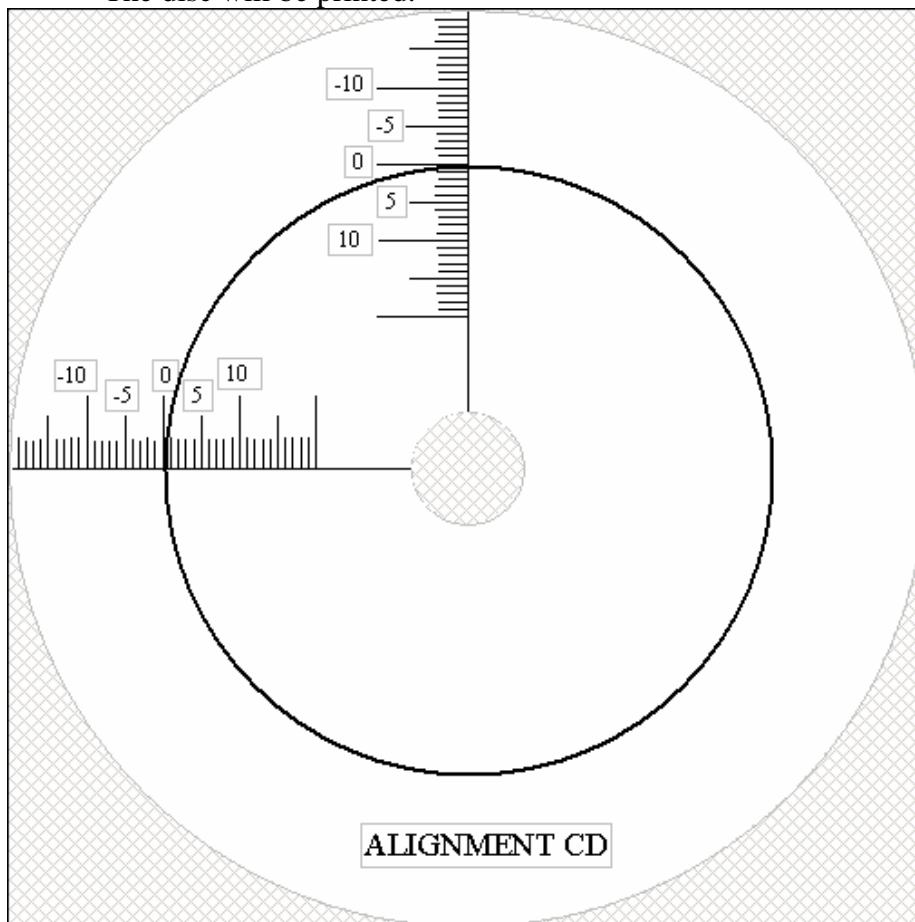
There are factory default numbers for the TOP and LEFT values for your printer. These can be found on a label, under the printer cover. You may need to adjust the values, depending on the images you are printing. To run the alignment utility, please follow these steps:

In Utilities Tab, select Print Align Disc.



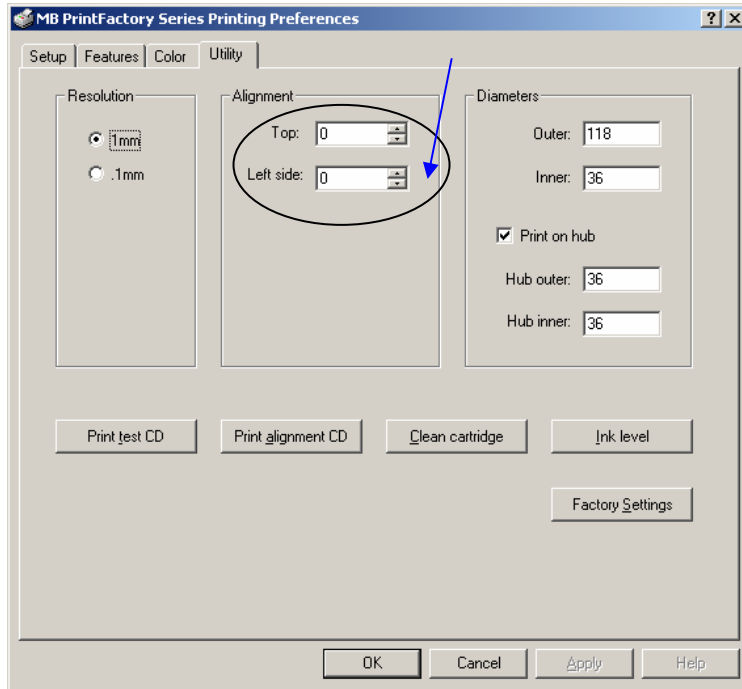


Place an Alignment CD into the printer.
Press Print.
The disc will be printed.



Confirm the numbers that cross the circle.

If the circle does not cross the circle at the zero's, enter the vertical and horizontal numbers in the Utility Tab.



Once the new numbers are entered, click Apply.

The Alignment CD pattern is also included on the PrintFactory CD, so you can print additional Alignment patterns with your printer, once it is aligned. The alignment circle is 8 cm in diameter and is 2 cm from the outer edge of the CD.

Loading Discs

The next step is to load your Print Factory with discs. The system will accept CD or DVD 12 cm inkjet printable discs. If the disc does not have an inkjet printable surface, the ink will not adhere to the surface of the disc. The Print Factory will only accept 12 cm discs. Business card or 8 cm discs are not supported by this system.

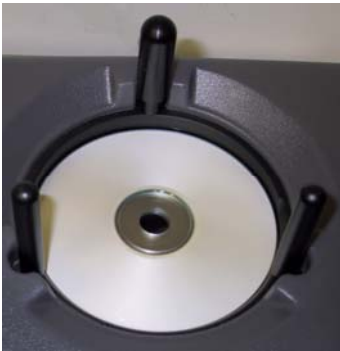


Figure 1

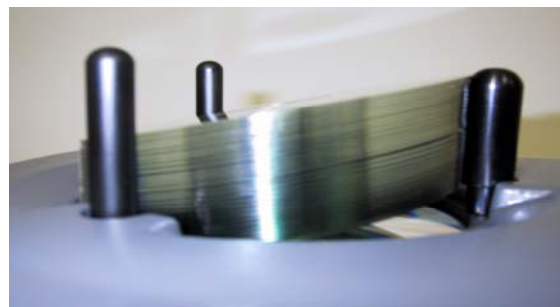


Figure 2

Load the first 5 or 6 discs flat, as seen in figure 1.

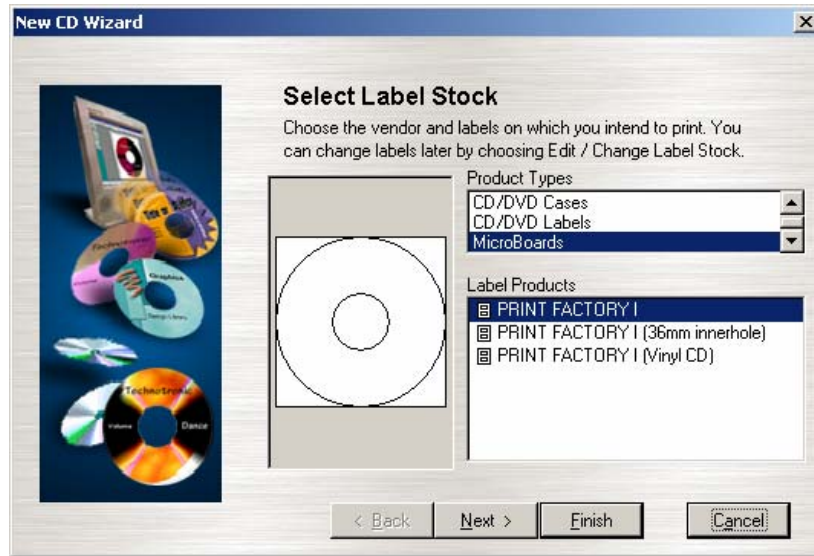
Load the rest of the discs at an angle, as seen in figure 2.

The Print Factory will hold a maximum of 50 discs. DO NOT load more than 50 discs in the system, as this will cause the discs to feed incorrectly.

The next step is to design your CD label. The Print Factory comes with Surething CD Labeler software. However, you can use any design software that is made to work with CD and DVD discs.

The following is an example of designing and printing a label with Surething.

Open Surething software.



Select the template you wish to use. There are three choices:

- 1) 12 CM disc with an inkjet printable hub.
- 2) 12 CM disc without an inkjet printable hub.
- 3) 12 CM disc by Verbatim called "Vinyl CD".**

** See page 27 for important information when using the Vinyl CD template

Click Next



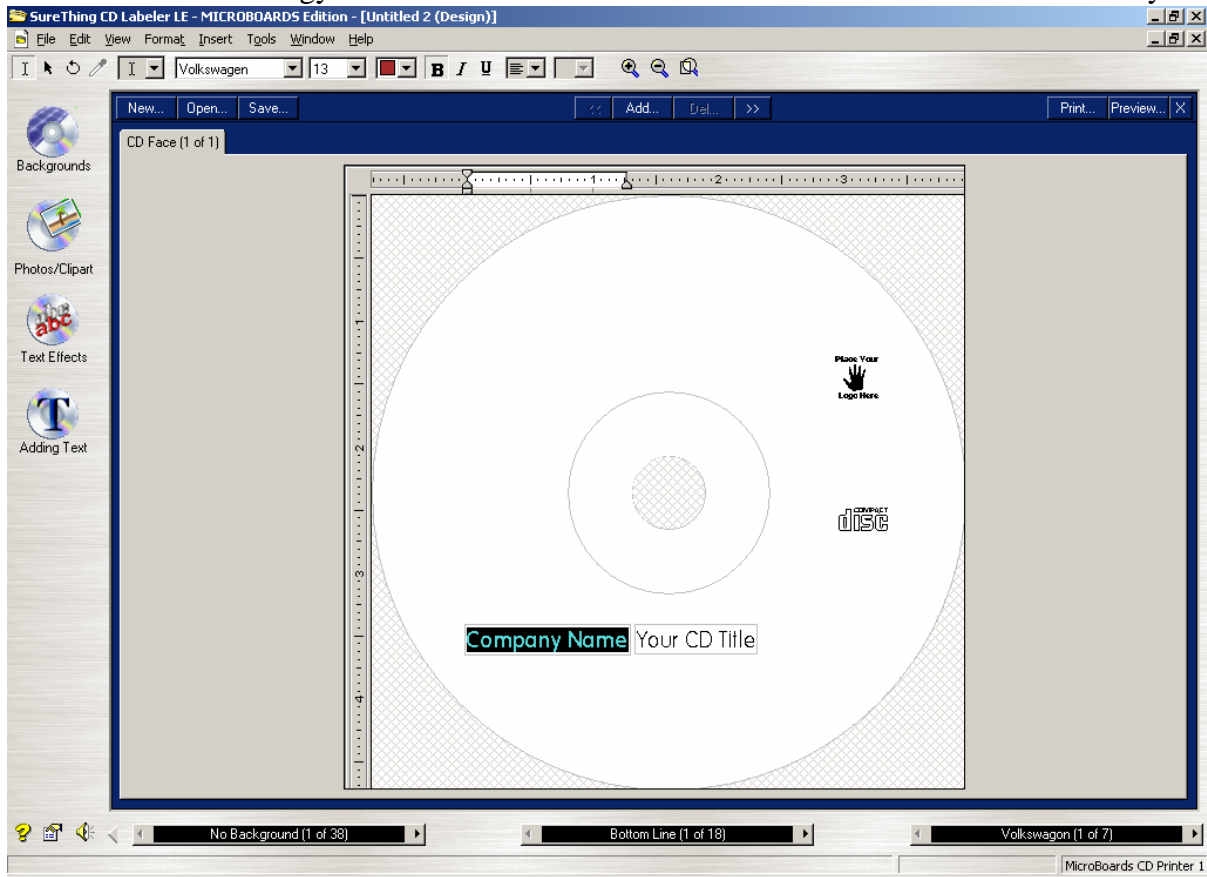
Click Next



At the SmartDesign screen, you can select one of three default layouts. If you wish to start with a blank layout, uncheck the User SmartDesigns box. After making your selection, click Next.



Click Finish.

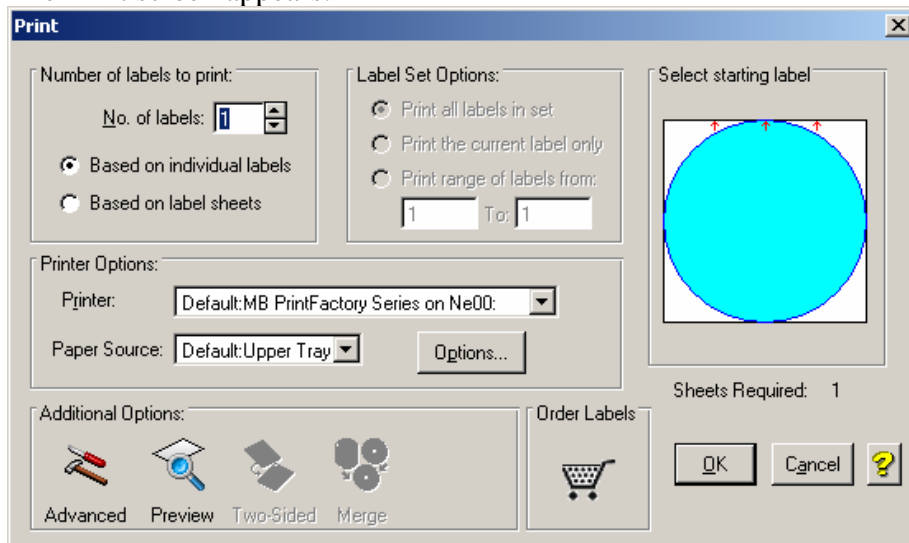


You can now design your label, adding text, graphics, backgrounds, etc.

For complete details on the options and operation of Surething software, please refer to the Help topics.

Once your label is designed, click on File and select Print .

The Print screen appears:



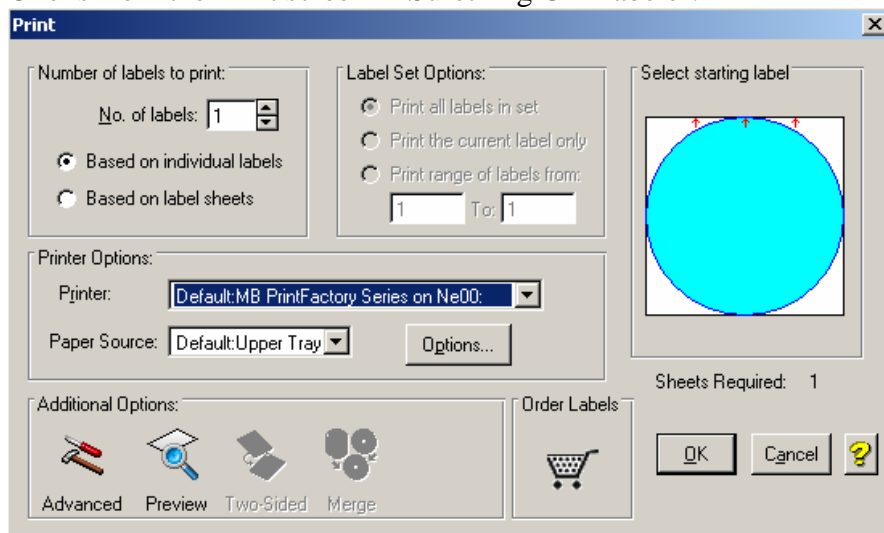
Select number of copies you wish to print and press OK. The system will now start printing your discs. The completed discs are placed in the output bin. They can be removed from the output bin at any time.



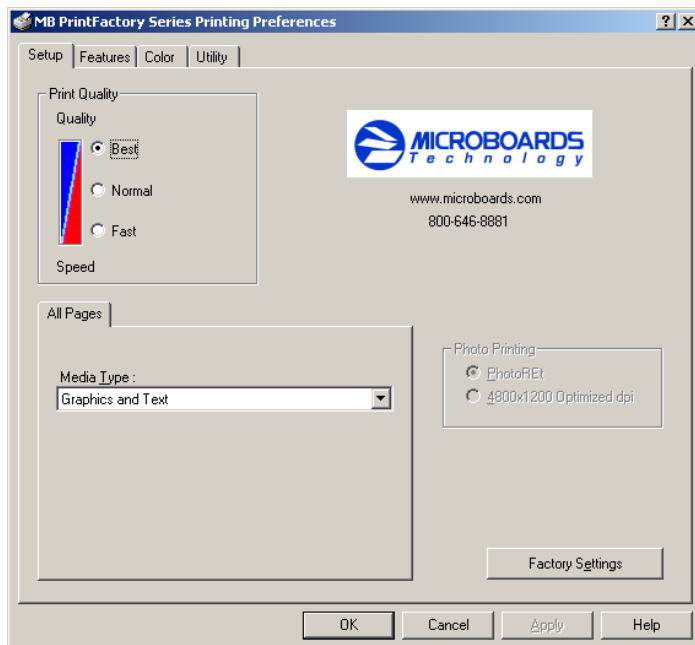
You may wish to make changes to the way a disc is printed, such as resolution, color, saturation, etc. This is done in the Printer Preferences.

There are two ways to open the Printer Preferences.

One is from the Print screen in Surething CD Labeler:



Press the Options button and the Printer Properties will appear.



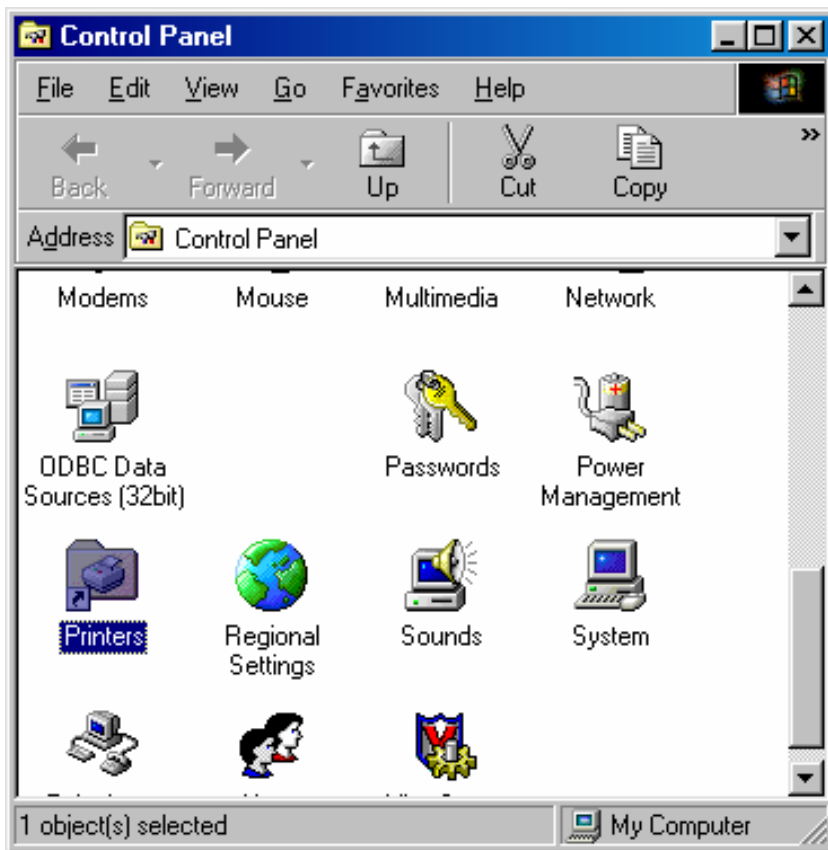
The other way is to go to click on Start, go to Settings and select Printers. Right click on the printer and select Printer Preferences. For a complete description of the Printer Preferences, go to Chapter 5.

Printing on Verbatim Vinyl CD-R discs

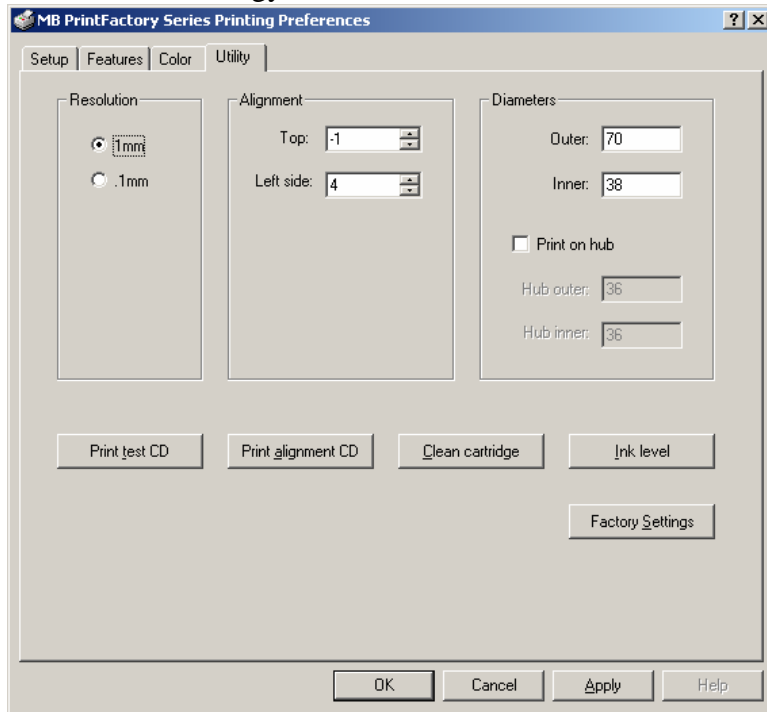


** Before printing a Verbatim Vinyl CD-R discs, you must first change the inner and outer diameters of the printable area, in the Utility Menu. Please follow these steps:

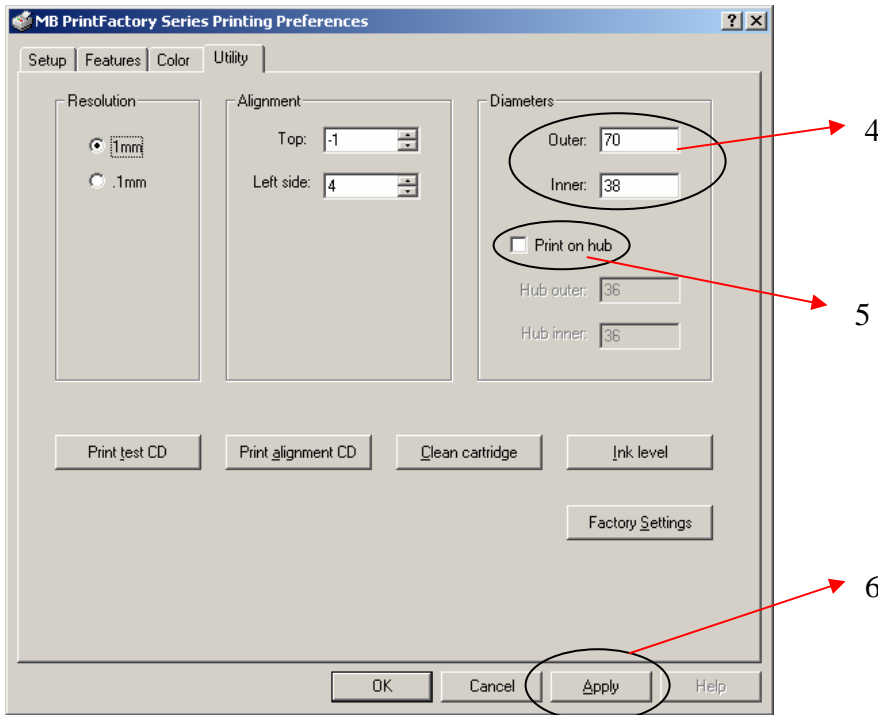
- 1) Double click on Printers in the control panel.



- 2) Right click on the Microboards PrintFactory printer and select Printing Preferences.
- 3) Click on the Utility tab.



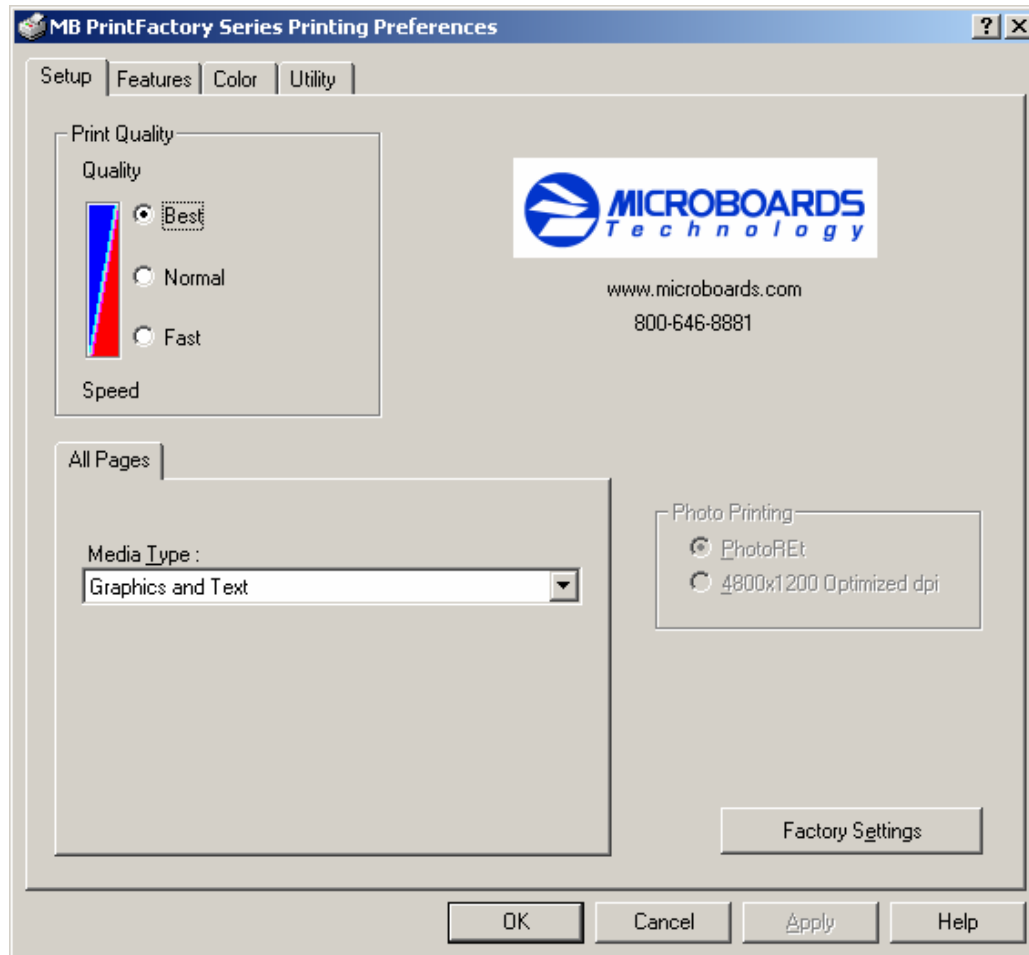
- 4) Change the Outer diameter to 70 and the inner diameter to 38. If you have the resolution set to .1mm, the outer diameter will be 700 and the inner diameter will be 380.
- 5) Uncheck the Print on hub checkbox.



- 6) Click on the Apply box.
- 7) Click OK.
- 8) The printer is now ready for use with the Verbatim Vinyl CD-R discs.
- 9) When you want to go back to printing on standard CD-R discs, you will need to change the inner and outer diameters back to the default values. The default outer diameter is 118 and the default inner diameter is 36. Again, if you are in the .1mm resolution, the numbers would be 1180 and 360.

Chapter 5 Printer Properties

Setup Tab



Print Quality

- Best
- Normal
- Fast

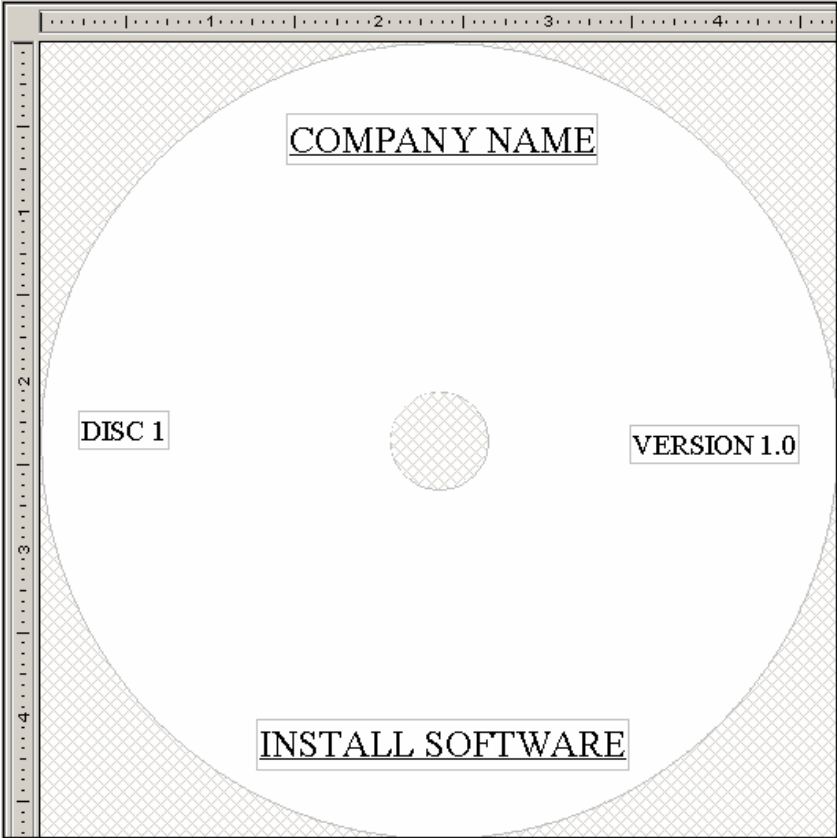
Print Modes

- Text and Graphics
- Photo

Remember that when printing in Text and Graphics mode, the HP C8842A, Versatile Black Ink cartridge is highly recommended. If you do not have this black ink cartridge installed, we recommend using Photo Mode.

Printing Recommendations

Text and Graphics mode is used for printing mainly text information and small graphics. Here are some examples for images in Fast, Normal and Best Modes:



Text and Graphics – Fast



Text and Graphics – Normal

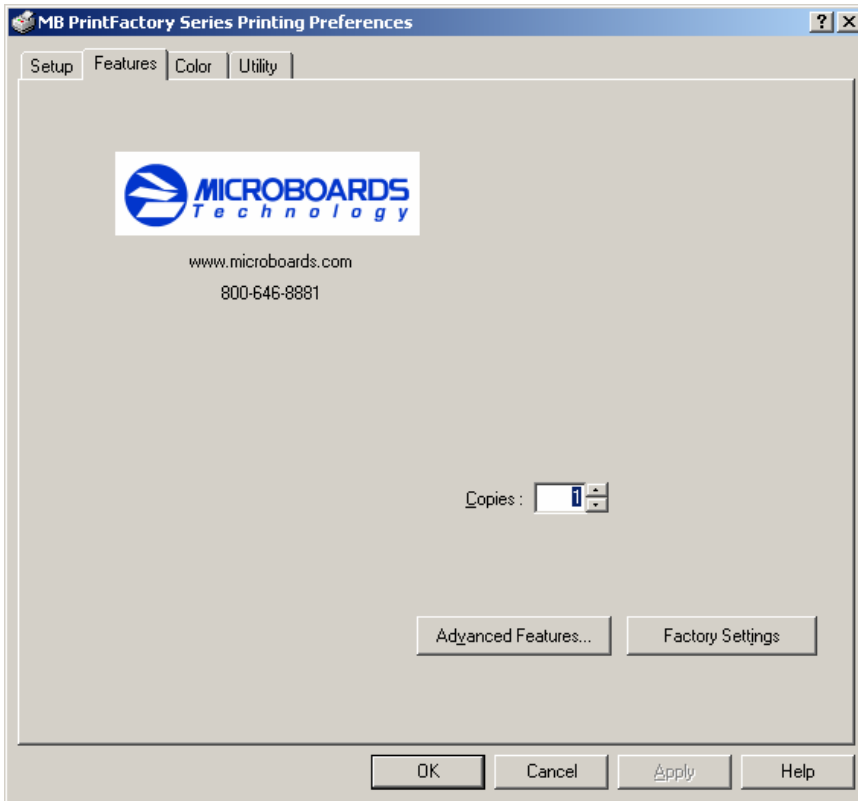


Text and Graphics – Best

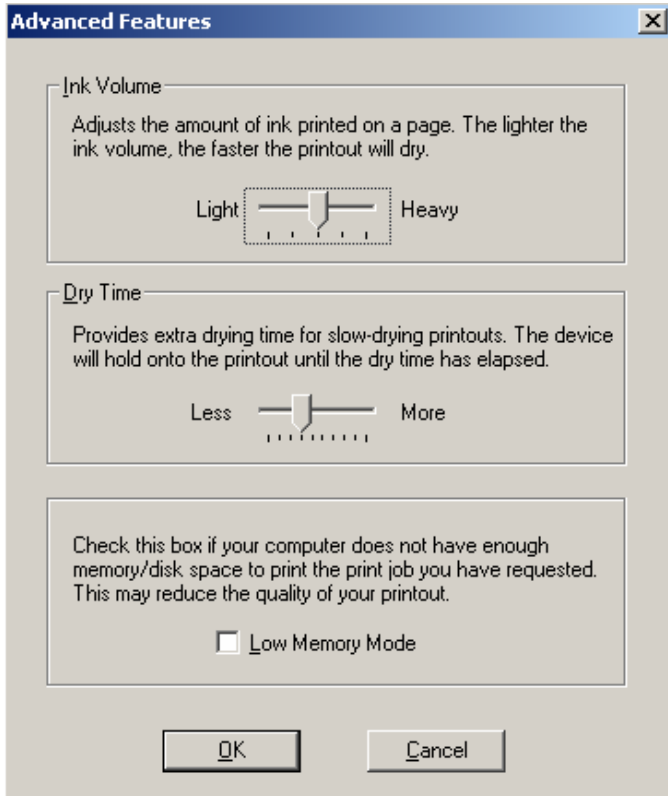
Photo Mode will be used when printing on the entire disc. Here is an example:



Photo – Normal, Best and 4800x1200 Modes

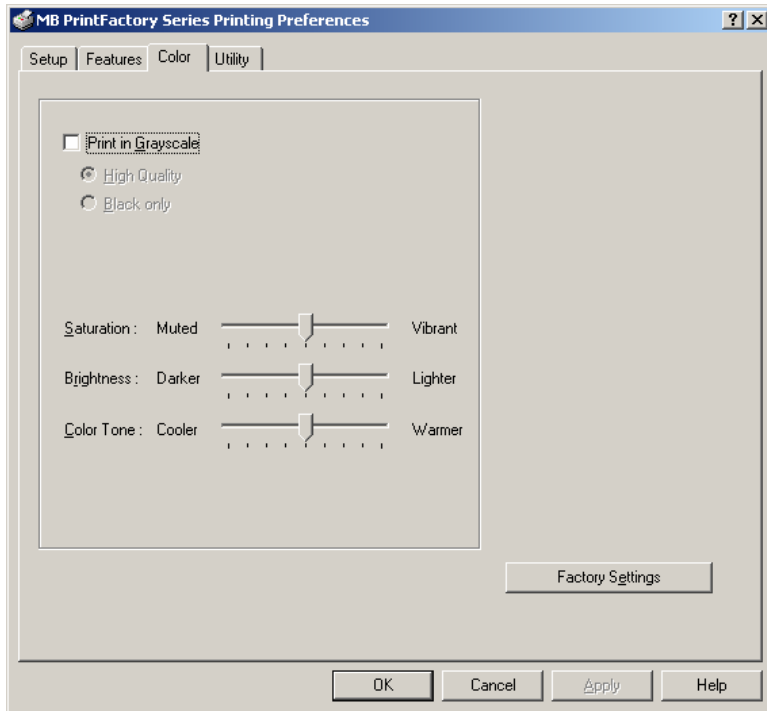


The Features tab lets you set the number of copies.



Advanced Features allows you to adjust the amount of ink placed on the disc and adjust the dry time of the disc.

Color Tab

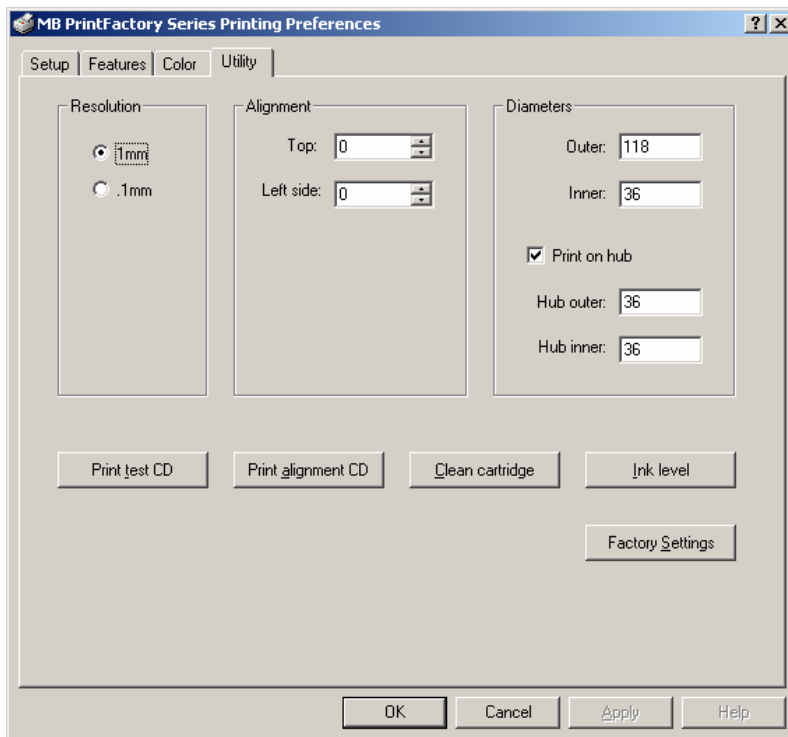


Print in Grayscale – This allows you print in grayscale only. The High Quality setting will print the disc using the Color ink cartridge. The Black Only selection will use the Black ink cartridge only.

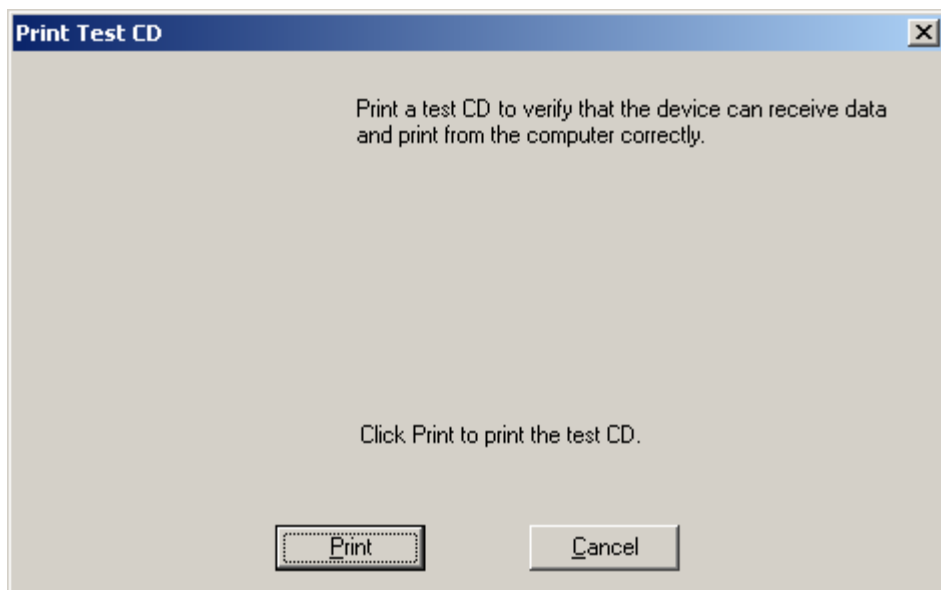
Saturation, Brightness and Color Tone allow you to fine tune your print image.

Factory Settings will set the above values back to the factory defaults.

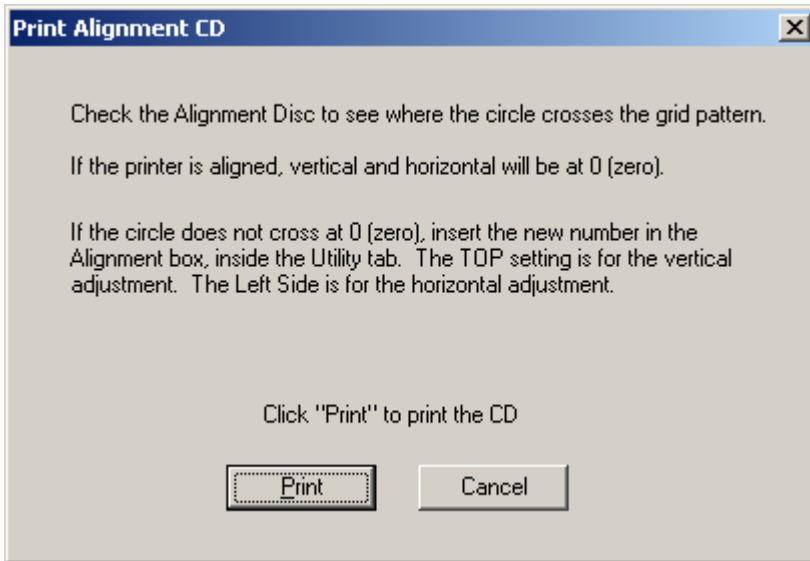
Utility Tab



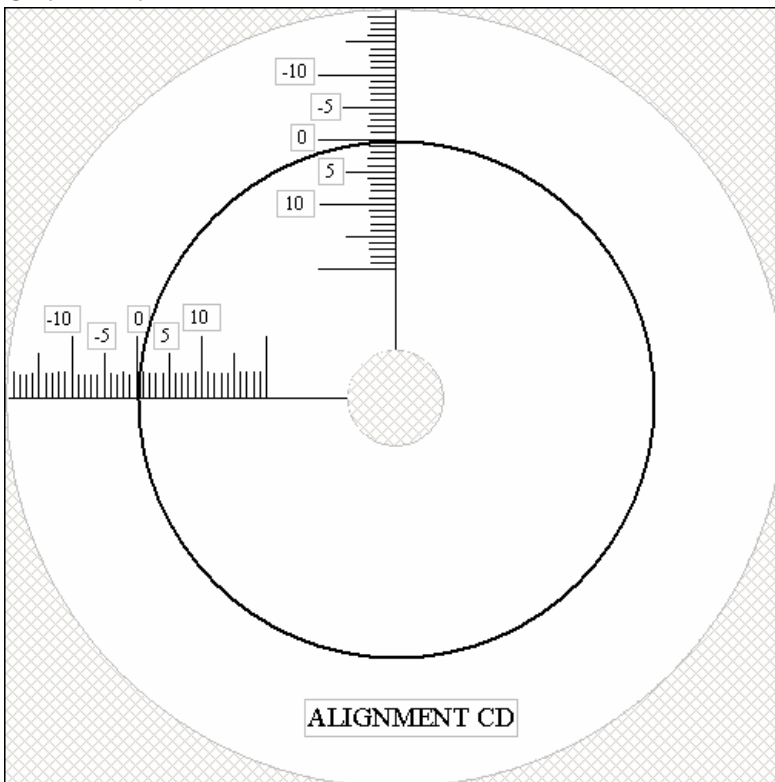
Print test CD



Place an alignment CD into the printer and click on the Print Alignment CD button

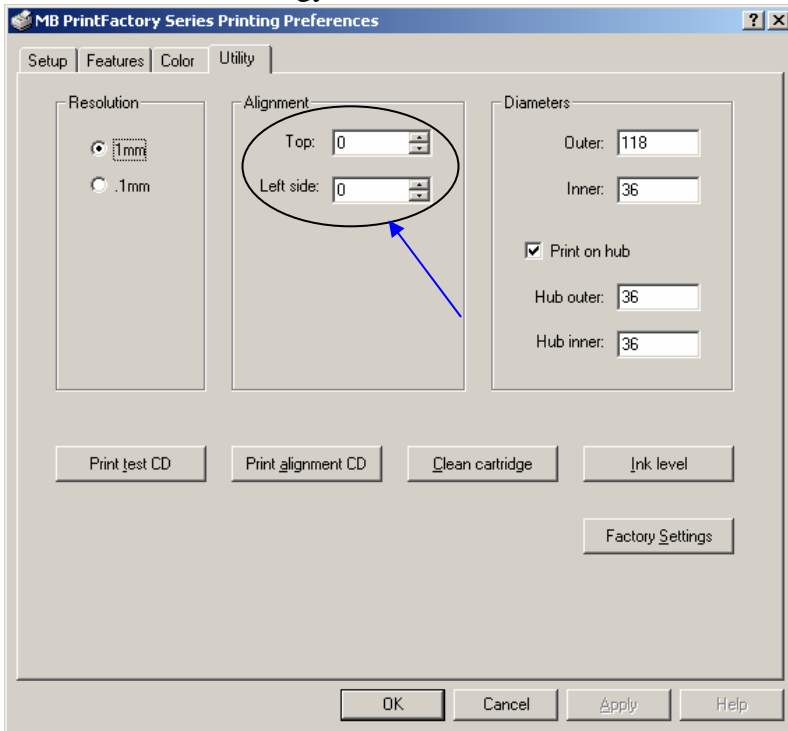


Click Print

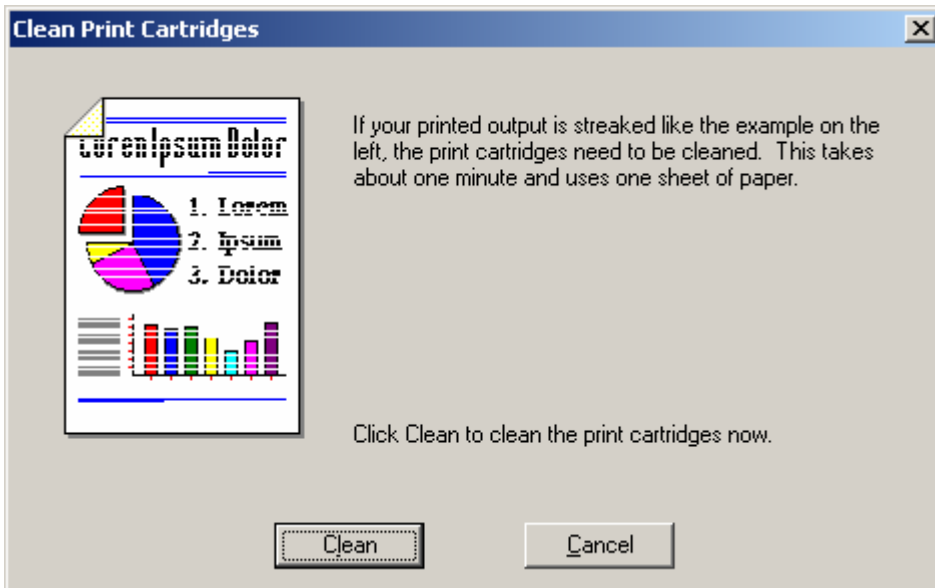


Once the disc is printed, check where the circle is located on the horizontal and vertical lines. If either numbers are not zero, place the new number for vertical (TOP) and horizontal (LEFT) in the Utility tab, and click Apply.

NOTE: If alignment is required in the future, after using the printer for some time, make sure and click on the Factory Defaults button, to reset the alignment numbers, before running the Align Disc procedure.



Clean Cartridge

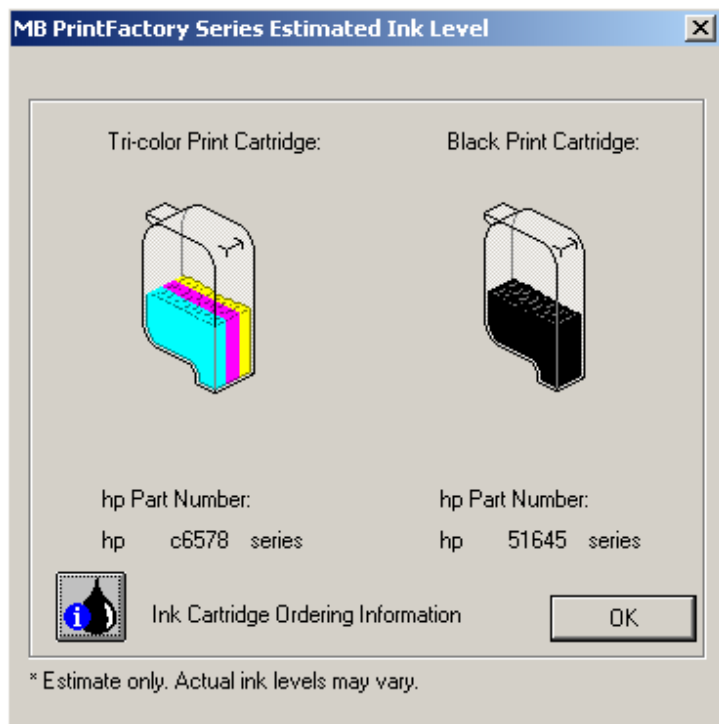


If your image looks like this example, it may be necessary to clean the ink cartridges. Click on the Clean button. The printer will clean the cartridges and print out the following image:



If one cleaning does not fix the issue, repeat the process. If after multiple cleanings, the problem still exists, it may be a defective ink cartridge. Try another cartridge and print again.

Ink Level



This button will give an estimate of how much ink is left in the color and black cartridges. Please note that the printer assumes that when a cartridge is replaced, it is replaced with a new, full cartridge. If a used cartridge is used as a replacement, the ink levels may not be correct.

Chapter 6 Solve a Problem

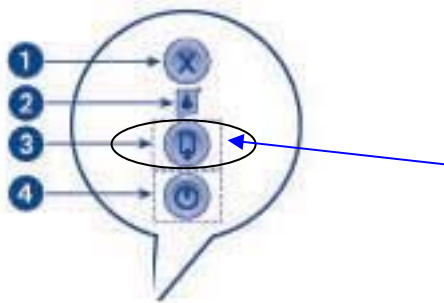
Printer not printing:

Confirm the printer is plugged into a power source and is turned on. The ON/OFF switch is located at the back of the unit, above the power cable connector.

Confirm the green light is lit on the three button front panel. If AC power is on and the green light is off, press the O button on the front panel. If the light still does not come on, contact Microboards technical support.

Confirm the printer is connected to the computer, with a parallel or USB cable. This can be checked by clicking on Start, going to Settings and selecting Printers. Confirm the printer is listed and is active. If the icon is not active, make sure the Use Printer Offline is not selected. Also check to make sure the correct printer port is selected.

Out of Paper indication:



If the Out of Paper indicator is blinking confirm there are discs in the input bin. If the input bin is empty, add more discs and press the out of paper button.

If there are discs in the input bin, the disc may not have dropped correctly on the belt. Press the out of paper button on the interface and the system will attempt to load another disc. If that does not fix the problem, proceed to Disc Loading Error.

Disk Loading error:

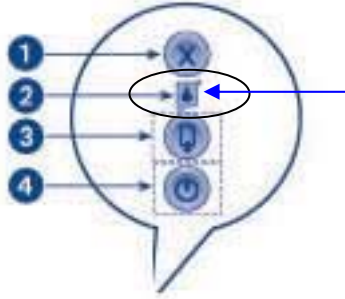
If a disc is not loaded correctly, it could cause the out of paper indicator to come on. Press the out of paper button on the interface. The printer will attempt to load another disc. If this does not clear the error, remove the discs from the input bin. Check to see if there are any discs on the belt. Remove any discs that are left on the belt.

Lift the cover and check for any discs on the front part of the printer. Remove any discs found on the belts. Close the cover.

Next, reload the input bin and press the out of paper button. The system will load the next disc and continue printing the remaining discs for that job.

Low Ink indication:

When an ink cartridge is low on ink, the Ink indicator on the front panel will come on.



Once you notice poor ink quality or a missing color in your prints, replace the ink cartridge.

Chapter 7 Product Specifications

Print Speed:

Depends upon percentage of coverage and print mode selected

About 108 seconds for 100%, full-color coverage, Photo Normal Mode

About 20 seconds for 100%, full-color coverage Text & Graphics Best Mode

About 12 seconds for 20% coverage Text & Graphics, Normal Mode

Ink Types:

3-Color HP C6578a cartridge

3-Color HP C6578d cartridge

Black monochrome HP C8842a Fast Dry Black (recommended)

HP C6615d Photo Mode Only

HP 51645a Photo Mode Only

Media Types:

Printable-surface 120mm CD-R or DVD-R

Label Editing Software:

Surething™ First Edition Software for Windows included

Maximum Print Width:

4.72" (120mm)

Power Supply:

Auto Detect AC Power:

90VAC – 240VAC, 47Hz – 63Hz

Warranty:

One Year

Print Technology: HP Thermal Inkjet

Print Quality, Black: 600 x 600 dpi, with HP PhotoREt III

Print Quality, Color: 4800 x 1200 optimized dpi, with HP PhotoREt III

Color Technology: HP PhotoREt III

Memory: 8MB

Connectivity: USB or Parallel

Supported Operating Systems: Windows 2000, Windows XP

System requirements: Pentium 233 MHz, 128 MB RAM, 40 MB hard disk space

Chapter 8 Contact Information

For technical questions or support issues, please contact Microboards Technology technical support at PH: 952-556-1639, FAX: 952-556-1628, by email at support@microboards.com or on the web at <http://www.microboards.com>.